

REMARKS

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, Claims 9, 10, 12, and 13 will remain pending in the application. Applicants have amended Claim 9 and canceled Claims 1-4 and 11. These changes do not introduce new matter, and their entry is respectfully requested.

In the Office Action of November 28, 2003, the Examiner set forth a number of grounds for rejection. These grounds are addressed individually and in detail below.

Rejections Under 35 U.S.C. § 112

Claim 13 stands rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification. Specifically, the Examiner alleges that the specification does not teach using SEQ ID No:20 as a detection probe. Applicants respectfully traverse the rejection.

The specification, as originally filed, teaches the use of SEQ ID No:20 as a detection probe in Example 3 (see page 24, lines 29-30). Accordingly, Applicants respectfully submit that Claim 13 is fully supported by the specification. Withdrawal of the 35 U.S.C. §112, first paragraph rejection is respectfully requested.

Claims 9-13 stand rejected under 35 U.S.C. § 112, second paragraph, as containing subject matter which was not described in the specification. Specifically, the Examiner alleges that the phrase “the RNA derived from the *mecA* gene” in Claim 9, part (b), lacks proper antecedent basis. Applicants respectfully submit that the amended Claim 9, part (a), recites: “a cleaving oligonucleotide probe comprising a sequence complementary to a region overlapping and adjacent to the 5'-end of an RNA derived from the *mecA* gene of MRSA,” which provides a

proper antecedent basis for the phrase "the RNA derived from the mecA gene" in Claim 9, part (b).

The ground for the 35 U.S.C. §112, second paragraph rejection has been obviated. Withdrawal of the rejection is respectfully requested.

Rejections Under 35 U.S.C. § 103

Claims 9 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bekkaoui et al. (US 6,136,553) in view of Ryffel et al (Gene, 94 (1990) 137-138) for the reasons set forth on pages 4-7 of the Office Action. Claim 10 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Bekkaoui in view of Ryffel, and further in view of Davey et al. (US 5,554,517) for the reasons set forth at pages 7-8 of the Office Action. Claims 11-13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bekkaoui in view of Ryffel, and further in view of Ishiguro et al. (Nucleic Acid Research, 1996, Vol. 24, pages 4992-4997) for the reasons set forth at pages 8-10 of the Office Action.

Claim 11 has been canceled and Claim 9 has been amended. Accordingly, Applicants respectfully traverse the rejection.

To establish a *prima facie* case of obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

The present invention is directed to a method for detecting MRSA with an RNA amplification process comprising the synthesis of cDNA from an RNA template, the digestion of RNA-DNA hybrid, the second strand synthesis of the cDNA, and the transcription of an RNA

product from the double-stranded cDNA. Independent Claim 9, as amended, requires a first primer having an RNA polymerase promoter sequence, a second primer, and a cleaving oligonucleotide probe comprising a sequence complementary to a region overlapping and adjacent to the 5'-end of an RNA derived from the *mecA* gene of MRSA. Claim 9 further recites specific primer combinations, i.e., (1) an oligonucleotide comprising at least 10 contiguous bases of the sequence recited in SEQ ID No:18 is used as the first primer, an oligonucleotide comprising at least 10 contiguous bases of the sequence recited in any of SEQ ID NoS:19, 20 and 21 is used as the second primer, and an oligonucleotide comprising the sequence recited in SEQ ID No:26 is used as the cleaving oligonucleotide probe, or (2) an oligonucleotide comprising at least 10 contiguous bases of the sequence recited in SEQ ID No:22 is used as the first primer, an oligonucleotide comprising at least 10 contiguous bases of the sequence recited in any of SEQ ID NoS:23 and 24 is used as the second primer, and an oligonucleotide comprising the sequence recited in SEQ ID No:27 is used as the cleaving oligonucleotide probe, or (3) an oligonucleotide comprising at least 10 contiguous bases of the sequence recited in SEQ ID No:25 is used as the first primer and an oligonucleotide comprising at least 10 contiguous bases of the sequence recited in any of SEQ ID NoS:23 and 24 is used as the second primer, and an oligonucleotide comprising the sequence recited in SEQ ID No:28 is used as the cleaving oligonucleotide probe.

Applicants respectfully submit that Bekkaoui and Ryffel, individually and in combination, do not teach or suggest a cleaving oligonucleotide probe. Accordingly, Claim 9, as amended, is not obvious over Bekkaoui and Ryffel.

The Examiner alleges that a reaction mixture comprising a cleaving probe is necessarily produced in the methods taught by Bekkaoui et al. and that the primer pair comprising SEQ ID

NoS:18 and 20 would result in the production of a “cleaving probe” comprising SEQ ID No:27.

Applicants respectfully disagree.

First, the present invention teaches the preparation of a reaction mixture containing the cleaving probe, and then, initiating the reaction by incubating the reaction mixture under conditions that allow the formation of a double-stranded cDNA product from the RNA derived from the *mecA* gene of MRSA and the transcription of an RNA product from the double-stranded cDNA product. Bekkaoui does not teach or suggest initiating the reaction in the presence of a cleaving probe.

Second, as recited in amended Claim 9, the cleaving probe must be complementary to a sequence in the *mecA* RNA that is overlapping and adjacent to the “target sequence,” which is the sequence that is homologous to the non-promoter portion of the first primer. This relationship has been clearly defined by the specific primer/probe combinations recited in Claim 9. Accordingly, if the primer pair comprising SEQ ID NoS:18 and 20 is used, the cleaving probe would comprise SEQ ID No:26. Thus, the extension product containing SEQ ID No:27, as recited by the Examiner on page 7 of the Office Action, cannot be considered as a cleaving probe.

Furthermore, any extension product that is complementary to a sequence in the *mecA* RNA that is overlapping and adjacent to the “target sequence” would necessarily derived from the first primer and hence contains the RNA polymerase promoter sequence. Claim 9, as amended, recites that the cleaving probe does not include the sequence of the second primer. Accordingly, the extension products in Bekkaoui cannot be used as a cleaving probe.

In sum, neither Bekkaoui nor Ryffel teach or suggest a cleaving probe. The secondary references of Davey and Ishiguro do not compensate for the lack of suggestion (obviousness) of the invention in the primary references. Therefore, independent Claim 9 is patentable over

Bekkaoui, Ryffel, Davey and Ishiguro. Applicants further submit that Claims 10, 12, and 13 are allowable because they depend from Claim 9 and recite additional patentable subject matter.

Therefore, the references of Bekkaoui, Ryffel, Davey and Ishiguro do not support a *prima facie* case of obviousness. This ground of rejection has been obviated and withdrawal of the 35 U.S.C. § 103 rejection is respectfully requested.

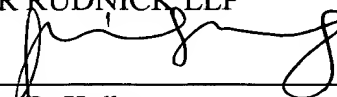
CONCLUSION

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to contact Ping Wang, M.D. (Reg. No. 48,328) at the telephone number listed below.

Respectfully submitted,

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United States Court of Customs and Patent
Appeals.

**Application of Stephen F. ROYKA and
Robert G. Martin.**

Patent Appeal No. 9092.

Feb. 7, 1974.

Appeal from the decision of the Patent Office Board of Appeals affirming the examiner's rejection of patent application, Serial No. 648,701, for a 'responsive answer system.' The Court of Customs and Patent Appeals, Rich, J., held that an answer sheet for use in self-instruction and testing, in which were printed in 'response areas' meaningful information in permanent printing and confusing information in printing which could be removed, as by an erasure, both being legible so that a student, seeing a choice of answers to a question, was required to make a selection, the correctness of the selection being shown by the information which was then removed by the erasure, was not anticipated by prior patents and was therefore patentable.

Reversed.

West Headnotes

Patents ⇨ 66(1.20)
291k66(1.20) Most Cited Cases

"Responsive answer system," answer sheet for use in self-instruction and testing, in which were printed in "response areas" meaningful information in permanent printing and confusing information in printing which could be removed, as by erasure, both being legible so that student, seeing a choice of answers to question, was required to make selection, correctness of selection being shown by information which was then removed by erasure, was not anticipated by prior patents and was therefore patentable. 35 U.S.C.A. §§ 102, 103.

Patents ⇨ 328(2)

291k328(2) Most Cited Cases

3,055,117, 3,364,857. Cited.

Patents ⇨ 328(1)
291k328(1) Most Cited Cases

356,695. Cited.

*981 Michael H. Shanahan, Rochester, N.Y., of record, for appellant; Thomas M. Webster, Rochester, N.Y., Boris Haskell, Washington, D.C. (Paris, Haskell & Levine), Washington, D.C., of counsel.

Joseph F. Nakamura, Washington, D.C., for the Commissioner of Patents. Fred W. Sherling, Washington, D.C., of counsel.

Before MARKEY, Chief Judge, and RICH, BALDWIN, LANE and MILLER, judges.

RICH, Judge.

This appeal is from the decision of the Patent Office Board of Appeals affirming the examiner's rejection of claims 28 and 30-36 of application serial No. 648,701, filed June 26, 1967, entitled 'Responsive Answer System.' We reverse.

The Invention

The appealed claims are directed to a device in the nature of an answer sheet for use in self-instruction and testing. The answer sheet may be associated with questions or separate therefrom. The essential features of the invention are that there are printed on the answer sheet in 'response areas' meaningful information in permanent printing and confusing information in printing which can be removed, as by an eraser, both being legible so that a student, seeing a choice of answers to a question, must make a selection. Having made a selection, he then applies an eraser to the selected response area and some of the information will be readily removed. What remains advises him of the correctness or otherwise of his answer. The following figures from the drawings are illustrative:

PERMANENT MEANINGFUL
INFORMATION PLUS REMOVABLE
CONFUSING INFORMATION

A. TRUE
Y NO
E
S
WRONG

B. FALSE
N YES
O
RIGHT

FIG. 1A

PERMANENT MEANINGFUL
INFORMATION

A.
Y
E
S

B.
N
O

FIG. 1B

Fig. 1A shows two response areas to a given question before any removing action *982 by the student has taken place and Fig. 1B shows the permanent information remaining in each after erasure of the removable information. Of course, if the student makes an initial choice of area A, showing up 'YES' or some other indication of a correct answer, he will not need to proceed further and erase the B area. In a modified form of the invention, a wrong selection, plus erasure, may expose, instead of or in addition to a statement that the answer is wrong, a number or other reference to further material which is to be studied.

A preferred method of printing the permanent meaningful information and the removable confusing information is by that type of xerography in which a fusible toner is used, the permanence of the printing depending on the extent to which the toner image is 'fixed' or fused by heat. By successive printings of the two kinds of information with fixing to different degrees, one image can be made permanent and the other made subject to easy removal, both images retaining such similarity of appearance that the user of the answer sheet cannot tell them apart.

Claim 28 is the principal claim, all others being dependent thereon, and reads as follows:

28. A device for selectively indicating information comprising

a support having response areas for presenting information for selection,

permanent printing indicative of meaningful information permanently fixed to said support within a response area, and

removable printing indicative of confusing information removably fixed to said support within a response area,

said meaningful and confusing information being substantially legible even when said permanent and removable printing are fixed over one another on said support,

said permanent and removable printing being substantially similar such that an observer cannot determine which information is permanent and which is removable

whereby the information within a response area is selected by attempting to remove the printing therein with the failure to remove printing identifying meaningful information.

Claims 30-36 add limitations which need not be considered except for noting that claims 33 and 34 alone specify the use of a xerographic toner, for which reason they were rejected on a different ground from the other claims.

The Rejection

The following references were relied on:

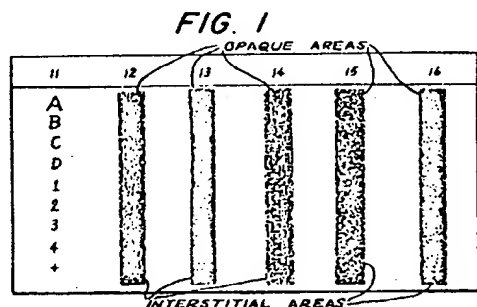
Reid et al. (Reid) 356,695 Jan. 25, 1887
Bernstein et al.
(Bernstein) 3,055,117 Sep. 25, 1962
Lein et al. (Lein) 3,364,857 Jan. 23, 1968
(filed Feb. 2, 1966)

Claims 28, 30, 31, and 32 were rejected as anticipated under 35 U.S.C. § 102 by Bernstein; claims 28, 31, 32, 35, and 36 were rejected as anticipated under § 102 by Reid; and claims 33 and 34 were rejected under 35 U.S.C. § 103 for obviousness, on either Bernstein or Reid in view of Lein. These were the examiner's rejections and the board affirmed them, adhering to its decision on reconsideration.

Bernstein discloses an answer sheet in which printed information representing a response is 'temporarily concealed from the observer' and he discloses a number of different ways of effectively concealing the response. His specification states:

The objects of the invention are accomplished by utilizing the hiding media to confuse the participant and to render the response and the hiding media indistinguishable and thus conceal the presence, absence, nature or position of the response from the participant. This may be effectuated by careful attention being paid to a number of factors including the design, *983 color and position of the hiding or confusing media.

Fig. 1 of Bernstein's drawings, illustrates some of his concealing means:



The following is the written description:

Referring now to the drawing, FIG. 1 illustrates some of the many optically confusing patterns which may be positioned between the printed structure to be concealed and the point of observation. Column 11 shows the information which is to be concealed. This information is repeated in columns 12 through 16 but in each case is concealed by a pattern in accordance with the present invention. Column 12 utilizes a pattern comprising an alphabetical maze in both line and half tone screen. Column 13 utilizes a pattern comprising an absorbing field having a plurality of irregular dot-like interstices. Column 14 utilizes a pattern comprising a maze of plus signs combined with dots. Columns 15 and 16 illustrate irregular and non-repetitious patterns.

Bernstein says that if at least 50% Of the response is actually covered by the opaque portions of the confusion pattern, complete concealment is obtained. He also says that added means of concealment may be used, such as scoring and embossing and perforating the paper in order to scatter the light or let it shine through.

Reid is entitled 'Transformation Picture and Print.' The invention is said to be useful for advertisements, Christmas cards, birthday cards, valentines, and the like and as a source of amusement and instruction for children. It consists of a picture or print, part of which is permanently printed and part of which is removable from the paper on which it is printed. For the latter various soluble undercoatings or inks are described. If the picture is washed with a solvent, which may be water, the removable part disappears and the pictorial and/or typographic matter changes. The invention is illustrated by a typical nineteenth century temperance propaganda piece depicting the evils of drink. In the finished picture there are three scenes from left to right: Scene 1, the innocent child

leads her father home from the pub; Scene 2, Father sits slumped in the kitchen chair with his bottle beside him, the family wash hanging above his head, this picture being entitled 'The Effects of Drink'; Scene 3, Mother stands in front of a sign reading 'Pawn Shop.' Across the bottom of the picture is a legend which says 'Wash the above and see what water will do.' Fig. II shows the result of washing with water: Scene 1, a handsome young man and his happy daughter stroll on the street; Scene 2, Father sits erect in a well-appointed room at a clothcovered table, apparently having a cup of tea, obviously a gentleman; Scene 3, Mother beams from the sideline and the Pawn Shop sign has vanished. Two new subscriptions appear and the words 'The' and 'Drink' have disappeared, the resultant being a new picture title reading 'The Beneficial Effects of Temperance.' 'The Beneficial' and 'Temperance' were covered by some soluble opaque in the original picture. No doubt the overall effect is instruction. Perhaps there was amusement in bringing about the transformation.

Lein relates to xerography and is relied on only for its disclosure of the removability of partially fused toner and the permanence of fully fused toner.

OPINION

As to the § 102 anticipation rejections, it will suffice to consider independent claim 28. If it is not fully met by Reid *984 or Bernstein, neither are the more limited dependent claims. It is elementary that to support an anticipation rejection, all elements of the claim must be found in the reference. We do not find claim 28 anticipated by Bernstein because, as we read the claim, it requires the display of legible meaningful and legible confusing information simultaneously, between which the user of the device may make a selection before he undertakes to remove any of the information from the response area selected by him. The element we find most clearly missing, contrary to the reasoning of the examiner and the board, is the legible confusing information. The Patent Office proposes to read this limitation on

Bernstein's confusion patterns which are nothing but meaningless obscuring screens, conveying no information and providing the user with no basis for making a selection, as called for by claim 28. In appellants' device the legible confusing information-- i.e., the wrong answers-- are legible in the sense that they can be read as intelligible words, not merely a jumble of type serving to obscure the words of the wrong answers.

Appellants were fully aware of Bernstein and discussed its disclosures in their specification, distinguishing from this and other prior art, saying, in part:

The inventive concept hereof confuses not by physical blocking as taught by the prior art, but by compounding, associating (including disarranging) permanent information with confusing information, usually at least some of which is similar in character to the permanent information as to render it impossible to tell which is permanent and which is removable confusing information. In the invention, generally no attempt is made to designedly physically cover the permanent information, but to confuse it beyond interpretation by the presentation of extraneous removable, confusing information.

Claims are not to be read in a vacuum and while it is true they are to be given the broadest reasonable interpretation during prosecution, their terms still have to be given the meaning called for by the specification of which they form a part. We cannot read the terms 'legible' and 'information' on Bernstein's confusion patterns, as did the examiner and the board. They are not 'legible,' as appellants use the term, and they convey no information.

As to anticipation by Reid, we find neither appellants' basic concept nor the substance of claim 28 to be disclosed. Apparently the solicitor could find little to support the rejection in Reid for all he says in his brief-- so far as claim 28 is concerned-- is:

Reid discloses a sheet which may be used for instruction and which may have a removable

design partly covering a fixed design * * *. Therefore, the disclosure of the reference encompasses the arrangement wherein a removable design covers a fixed design with both designs being substantially legible.

But claim 28 does not call for an arrangement wherein a removable design covers a fixed design. It calls for response areas, which Reid does not have, containing meaningful information in permanent printing together with removable printing conveying confusing information, both legible at the same time, between which a 'selection' can be made. The only choice offered to the user by Reid is to follow the instruction to wash the whole visible picture with water or other solvent, thus removing the overprinting, to discover what the permanent picture is. The Patent Office attempt to read claim 28 on this reference is a tour de force. We hold that Reid does not anticipate for failure to meet the limitations of claim 28 to 'response areas,' to the presentation of two categories of information (meaningful-permanent and removable-confusing) within such areas, and the possibility of selection. Anticipation requires a finding that the claimed invention be disclosed. It is not enough to say that appellants' invention and the reference are *985 both usable for instruction and both consist of permanent and removable printings on paper, as did the solicitor.

The dependent claims rejected with claim 28, as anticipated under § 102, are not anticipated since claim 28 is not anticipated. Some of them merely add features which are disclosed by the references and some do not. Insofar as they do not, they further negative anticipation. The examiner recognized this fact as to claims 33 and 34, which are limited to xerography, and therefore did not reject them under § 102. Similarly, he did not reject claim 30 on Reid or claims 35 and 36 on Bernstein. We find that claims 35 and 36 contain limitations which additionally distinguish from Reid. We have already noted that Reid had no 'response areas' as required by claim 28 and so Reid does not disclose the structure of claim 35 which additionally requires both the correct and incorrect

answers to appear within the same response area.

As to claim 36, the examiner said it 'is merely a printed matter variation of the design of the reference,' Reid. This is not a valid reason for rejection. Printed matter may very well constitute structural limitations upon which patentability can be predicated. We have commented on this matter in *re Jones*, 373 F.2d 1007, 54 CCPA 1218 (1967); and in *re Miller*, 418 F.2d 1392, 57 CCPA 809 (1969), and will not repeat ourselves. The limitations of claim 36 are not remotely suggested by Reid.

There remains the § 103 rejection of claims 33 and 34. Do they, taken together with all of the limitations of claim 28 from which they depend, define obvious subject matter? The difference between claim 28 and these two dependent claims is that they add the limitations to xerography. If Bernstein and Reid showed the claimed invention except for xerography, the addition of the Lein reference would make the subject matter of the claims obvious. But that is not the situation here. Adding the knowledge of xerographic technology to Bernstein or Reid still does not make the invention of claims 33 and 34 obvious for the same reasons we have given above in discussing anticipation. The essence of appellants' invention, as set forth in claim 28, is still missing notwithstanding the addition of the Lein reference and we see nothing in the combinations of references which would have made the invention obvious to one of ordinary skill in the art at the time it was made. We will, therefore, reverse this rejection.

The decision of the board is reversed.

Reversed.

490 F.2d 981, 180 U.S.P.Q. 580

END OF DOCUMENT

United States Court of Customs and Patent
Appeals.

Application of David W. WILSON.

Patent Appeal No. 8271.

May 7, 1970.

Proceeding on patent application serial No. 332,321. The Patent Office Board of Appeals affirmed rejection of claims 1-4, 8-10, and 15-21, and applicant appealed. The Court of Customs and Patent Appeals, Lane, J., held that Patent Office Board of Appeals' disregard of term 'incompatible' as used in claims relating to treatment of power driven rotary brushes with 'incompatible' resins rendered its conclusion of obviousness unsupported.

Reversed.

West Headnotes

[1] Patents ⇌ 101(5)
291k101(5) Most Cited Cases

Specification with respect to composition for treatment of power driven rotary brushes was sufficient to support claims in issue. 35 U.S.C.A. § 112.

[2] Patents ⇌ 51(1)
291k51(1) Most Cited Cases

All words in claim must be considered in judging patentability of claim against prior art. 35 U.S.C.A. § 103.

[3] Patents ⇌ 16(1)
291k16(1) Most Cited Cases
(Formerly 291k18)

[3] Patents ⇌ 101(6)
291k101(6) Most Cited Cases

If no reasonably definite meaning can be ascribed to certain terms in claim, subject matter does not become obvious, but claim becomes indefinite. 35 U.S.C.A. § 503.

[4] Patents ⇌ 113(6)
291k113(6) Most Cited Cases

Patent Office Board of Appeals' disregard of term "incompatible" as used in claims relating to treatment of power driven rotary brushes with "incompatible" resins rendered its conclusion of obviousness unsupported. 35 U.S.C.A. § 103.

Patents ⇌ 328(2)
291k328(2) Most Cited Cases

2,933,469, 2,890,136, 3,051,670, 3,015,638.
Cited.

****1382 *1029** Oberlin, Maky, Donnelly & Renner, William E. Thomson, Jr., John C. Oberlin, Cleveland, Ohio, attorneys of record, for appellant.

Joseph Schimmel, Washington, D.C., for the Commissioner of Patents. Raymond E. Martin, Washington, D.C., of counsel.

Before RICH, Acting Chief Judge, ALMOND, BALDWIN and LANE, Judges, and FORD, Judge, United States Customs Court, sitting by designation.

LANE, Judge.

This appeal is from the decision of the Patent Office Board of Appeals, which affirmed the rejection of claims 1-4, 8-10, and 15-21 in appellant's application serial No. 332,321, filed November 5, 1963, for 'Treated Brush and Brush Treating Composition.' Four other claims have been allowed. We conclude that the board's decision must be reversed.

THE DISCLOSURE

Appellant's disclosure discusses certain problems in the treatment of power-driven rotary brushes. According to the disclosure, it was desirable to produce ****1383** a composition for treating the brush bristles, whereby the ability of the bristles to hold abrasive particles would be enhanced. It discloses that the treatment composition should have a strength

of adhesion to the brush bristles sufficiently great to prevent such composition from transferring excessively to the object being brushed; that the treatment material should wear at substantially the same rate as the brush bristles; that the material should have a high temperature softening point; and that the strength of adhesion between the treating composition and the abrasive particles must be sufficient to withstand the centrifugal force which normally would tend to throw the abrasive outwardly from the brush. The disclosure *1030 states that previously known brush-treating compositions did not accomplish all these objectives and had a tendency to dry and lose their tackiness over a period of time, thus becoming useless for holding abrasive particles on the bristles.

The disclosure states that appellant discovered that a composition having a high temperature softening point and a high degree of tackiness could be produced if a film-forming resin were blended with a tackifier resin which was incompatible with (insoluble in) the film-forming resin. The resulting composition would have two distinct phases: a continuous phase comprised of film-forming resin, either alone or saturated with a small quantity of tackifier resin, and a dispersed phase comprised of small particles of tackifier resin. The two resins may be either completely or partially incompatible, and the disclosure states that the more insoluble the resins, the greater the tack which the composition possesses. Appellant also disclosed that certain plasticizers could be added to render the resins more incompatible, thus further increasing the tack of the composition. Finally, appellant stated that the entire composition could be dissolved in a volatile solvent to allow easy application to the brush, the solvent being one which quickly evaporates upon such application.

The specification contains a list of suitable film-forming resins, including ethyl cellulose, nitro cellulose, cellulose acetate, polyvinyl acetate and cis- polyisoprene, among other materials. A list of tackifiers is given, including certain esters of abietic acid, polyvinyl ethyl ether, coumarone indene resin

and terpene resins. A list of plasticizers is also given. The specification then gives four examples showing how to combine various film-formers, tackifiers, plasticizers and solvents to obtain brush-treating compositions of the desired characteristics, and explains how to apply them to brushes.

THE CLAIMS

In view of the result we reach, we find that claims 1 and 8 are representative:

1. A two-phase brush treating composition having a high softening point and sufficient tack to retain abrasive material firmly adhered to brush fill material comprising a film-forming resin and a tackifier resin which is incompatible with said film-forming resin, said two phases comprising a continuous phase formed of said film-forming resin and a dispersed phase formed of small particles of tackifier resin.

8. In combination, a rotary brush having brush fill material and a two-phase pressure sensitive adhesive brush treating composition adhered thereto having a high softening point and sufficient tack to retain abrasive material firmly adhered to such brush fill material comprising a film-forming resin and a tackifier resin which is incompatible with said film-forming resin, said two phases *1031 comprising a continuous phase formed of said film-forming resin and a dispersed phase formed of small particles of tackifier resin.

**1384 The remaining claims on appeal are narrower, containing recitations of specific resins, plasticizers, etc.

THE PRIOR ART

Grantham [FN1] relates to coatings for film material and discloses a coating composition comprising a cellulose derivative film-former, a blending resin, a plasticizer, and an organic solvent. Grantham teaches that the blending agent and the film-former should be compatible.

FN1. U.S.Pat. 3,051,670, issued August 28, 1962.

Depew [FN2] teaches the preparation of emulsions consisting of a continuous phase of water and a discontinuous phase of elastomer particles and particles of a volatile hydrocarbon, with vulcanizing ingredients and other additives dispersed in the hydrocarbon particles. Depew then stated that where a dispersion with additional adhesive properties is desired, an adhesive, such as certain of the tackifier resins disclosed by appellants, can be added to the emulsion, and that

FN2. U.S.Pat. 2,933,469, issued April 19, 1960.

this adhesive can be water soluble or dispersed as particles. * * * The chemistry of the adhesive component is not critical to this invention. The important thing is that the deposited film shall be tacky and adhesive.

Sergi [FN3] relates to adhesives suitable for installation of floor-covering products such as linoleum. Sergi's composition consists of a tackifier resin dispersed in a latex binder; the tackifier and latex must be compatible with one another, according to the Sergi disclosure.

FN3. U.S.Pat. 3,015,638, issued January 2, 1962.

Vaughan [FN4] teaches impregnating a fibrous buffing wheel with an aqueous emulsion consisting of a tacky resin and an emulsifier or stabilizer such as glue or gum.

FN4. U.S.Pat. 2,890,136, issued June 9, 1959.

THE BOARD

The board found the composition claims to be unpatentable over Depew, Sergi or Grantham under 35 U.S.C. § 103. The board reached this conclusion after noting that each of the three references shows some of the film-formers, tackifiers, plasticizers and solvents appearing in appellant's lists. The board found that the recited limitation of incompatibility was too relative a term to distinguish over the compositions of the references.

The board found that the claims to the treated brush were unpatentable, under 35 U.S.C. § 103, over Vaughan in view of Sergi

or Depew. Since Vaughan shows treating brushes, the board apparently considered *1032 it obvious to treat brushes with compositions which it thought were made obvious by Sergi or Depew.

The board also affirmed the rejection of certain claims for being 'broader than the disclosure' under 35 U.S.C. § 112. The board's basis for this rejection was that the specification did not provide adequate guidelines for making a selection among the various disclosed ingredients, nor among other materials which are not disclosed but would be included by the claims.

OPINION

[1] We first treat the rejection under section 112. This rejection is in effect an attack on the specification as being insufficient to teach how to practice the broad invention claimed. The rejection is therefore under the first paragraph of section 112. The board's position, as mentioned above, was that the specification did not teach how to select ingredients so that the desired incompatibility would result. We disagree with the board's position on this point. First of all, appellant provided four examples, each specifying the nature and amounts of materials to be used. Secondly, the record indicates that it involves only routine experimentation to find out which resins are incompatible. The examiner admitted as much when, **1385 with regard to obviousness, he said 'selecting the proper tackifier and film-forming resin from those listed in the references to form an emulsion or two-phase composition would be within the expected skill of the art and would merely involve routine experimentation.' We conclude that appellant has provided a sufficient specification to support the claims here in issue.

[2][3][4] Turning to the rejection of the claims for obviousness, we again disagree with the board's position. The board has disregarded the term 'incompatible,' as used in the claims, because it is 'too relative' to distinguish over the compositions of the references. Appellant contends this limitation is essential in

(Cite as: 57 C.C.P.A. 1029, *1032, 424 F.2d 1382, **1385)

defining his invention. There has been no rejection here for indefiniteness, under the second paragraph of section 112. Rather than reject the claims as indefinite, the board chose to ignore the language it considered indefinite, and proceeded as though that language were not in the claims. The board said, in effect, that since we do not know what 'incompatible' means, and the rest of the claim defines obvious subject matter, there is no basis for concluding unobviousness. This reasoning is incorrect. All words in a claim must be considered in judging the patentability of that claim against the prior art. If no reasonably definite meaning can be ascribed to certain terms in the claim, the subject matter does not become obvious-- the claim becomes indefinite. In the present case, we think the *1033 term 'incompatible' is defined with reasonable definiteness in the specification. While it is true that the word is not perfectly precise, under the circumstances of the present case there appears to be no other way for appellant to describe his discovery. In any event, the ignoring of this term by the board renders its conclusion of obviousness unsupported. None of the references discloses a two-phase composition of incompatible resins or suggests that such a composition would have the properties disclosed by appellant. Grantham and Sergi both expressly teach that the components of their compositions should be compatible. Neither Vaughan nor Depew uses a resin as the continuous phase. While Depew states, as quoted above, that the adhesive material may be dispersed as particles in the continuous phase, and hence be incompatible with the continuous phase material, it cannot be ignored that Depew's continuous phase is of water, not a film-forming resin as recited in appellant's claims. Furthermore, there is no suggestion in Depew or Vaughan that there are advantages in using an adhesive which is insoluble in the aqueous phase. There is nothing of record, therefore, from which we can properly conclude that the subject matter of appellant's claims would have been obvious at the time of his invention. The decision of the board must accordingly be reversed.

*1029 Reversed.

424 F.2d 1382, 57 C.C.P.A. 1029, 165 U.S.P.Q. 494

END OF DOCUMENT

FULL TEXT OF CASES (USPQ FIRST SERIES)

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In re Wilson

(CCPA)

165 USPQ 494

Decided May 7, 1970

No. 8271

U.S. Court of Customs and Patent Appeals

Headnotes

PATENTS

1. Claims - Indefinite - In general (§ 20.551)

Construction of specification and claims - In general (§ 22.01)

All words in claim must be considered in judging patentability of claim against prior art; if no reasonably definite meaning can be ascribed to terms in claim, subject matter does not become obvious - the claim becomes indefinite.

Particular patents-Brush

Wilson, Treated Brush and Brush Treating Composition, claims 1 to 4, 8 to 10, and 15 to 21 of application allowed.

Case History and Disposition:

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Appeal from Board of Appeals of the Patent Office.

Application for patent of David W. Wilson, Serial No. 332,321, filed Nov. 5, 1963; Patent Office Group 146. From decision rejecting claims 1 to 4, 8 to 10, and 15 to 21, applicant appeals. Reversed.

Attorneys:

Oberlin, Maky, Donnelly & Renner, William E. Thomson, Jr., and John C. Oberlin, all of Cleveland, Ohio, for appellant.

Joseph Schimmel (Raymond E. Martin of counsel) for Commissioner of Patents.

Judge:

Before Rich, Acting Chief Judge, Almond, Baldwin, and Lane, Associate Judges, and Ford, Judge, United States Customs Court, sitting by designation.

Opinion Text

Opinion By:

Lane, Judge.

This appeal is from the decision of the Patent Office Board of Appeals, which affirmed the rejection of claims 1-4, 8-10, and 15-21 in appellant's application serial No. 332,321, filed November 5, 1963, for "Treated Brush and Brush Treating Composition." Four other claims have been allowed. We conclude that the board's decision must be reversed.

The Disclosure

Appellant's disclosure discusses certain problems in the treatment of power-driven rotary brushes. According to the disclosure, it was desirable to produce a composition for treating the brush bristles, whereby the ability of the bristles to hold abrasive particles would be enhanced. It discloses that the treatment composition should have a strength of adhesion to the brush bristles sufficiently great to prevent such composition from transferring excessively to the object being brushed; that the treatment material should wear at substantially the same rate as the brush bristles; that the material should have a high temperature softening point; and that the strength of adhesion between the treating composition and the abrasive particles must be sufficient to withstand the centrifugal force which normally would tend to throw the abrasive outwardly from the brush. The disclosure states that previously known brush-treating compositions did not accomplish all these objectives and had a tendency to dry and lose their tackiness over a period of time, thus becoming useless for holding abrasive particles on the bristles.

The disclosure states that appellant discovered that a composition having a high temperature softening point and a high degree of tackiness could be produced if a film-forming resin were blended with a tackifier resin which was incompatible with (insoluble in) the film-forming resin. The resulting composition would have two distinct phases: a continuous phase comprised of film-forming resin, either alone or saturated with a small quantity of tackifier resin, and a dispersed phase comprised of small particles of tackifier resin. The two resins may be either completely or partially incompatible, and the disclosure states that the more insoluble the resins, the greater the tack which the composition possesses. Appellant also disclosed that certain plasticizers could be added to render the resins more incompatible, thus further increasing the tack of the composition. Finally, appellant stated that the entire composition could be dissolved in a volatile solvent to allow easy application to the brush, the solvent being one which quickly evaporates upon such application.

The specification contains a list of suitable film-forming resins, including ethyl cellulose, nitro cellulose, cellulose acetate, polyvinyl acetate and cis-polyisoprene, among other materials. A list of tackifiers is given, including certain esters of abietic acid, polyvinyl ethyl ether, coumarone indene resin and terpene resins. A list of plasticizers is also given. The specification then gives four ex

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amples showing how to combine various film-formers, tackifiers, plasticizers and solvents to obtain

brush-treating compositions of the desired characteristics, and explains how to apply them to brushes.

The Claims

In view of the result we reach, we find that claims 1 and 8 are representative:

1. A two-phase brush treating composition having a high softening point and sufficient tack to retain abrasive material firmly adhered to brush fill material comprising a film-forming resin and a tackifier resin which is incompatible with said film-forming resin, said two phases comprising a continuous phase formed of said film-forming resin and a dispersed phase formed of small particles of tackifier resin.

8. In combination, a rotary brush having brush fill material and a two-phase pressure sensitive adhesive brush treating composition adhered thereto having a high softening point and sufficient tack to retain abrasive material firmly adhered to such brush fill material comprising a film-forming resin and a tackifier resin which is incompatible with said film-forming resin, said two phases comprising a continuous phase formed of said film-forming resin and a dispersed phase formed of small particles of tackifier resin.

The remaining claims on appeal are narrower, containing recitations of specific resins, plasticizers, etc.

The Prior Art

Grantham ¹relates to coatings for film material and discloses a coating composition comprising a cellulose derivative film-former, a blending resin, a plasticizer, and an organic solvent. Grantham teaches that the blending agent and the film-former should be compatible.

Depew ²teaches the preparation of emulsions consisting of a continuous phase of water and a discontinuous phase of elastomer particles and particles of a volatile hydrocarbon, with vulcanizing ingredients and other additives dispersed in the hydrocarbon particles. Depew then states that where a dispersion with additional adhesive properties is desired, an adhesive, such as certain of the tackifier resins disclosed by appellants, can be added to the emulsion, and that

[t]his adhesive can be water soluble or dispersed as particles. * * * The chemistry of the adhesive component is not critical to this invention. The important thing is that the deposited film shall be tacky and adhesive.

Sergi ³relates to adhesives suitable for installation of floor-covering products such as linoleum. Sergi's composition consists of a tackifier resin dispersed in a latex binder; the tackifier and latex must be compatible with one another, according to the Sergi disclosure.

Vaughan ⁴teaches impregnating a fibrous buffing wheel with an aqueous emulsion consisting of a tacky resin and an emulsifier or stabilizer such as glue or gum.

The Board

The board found the composition claims to be unpatentable over Depew, Sergi or Grantham under 35 U.S.C. 103. The board reached this conclusion after noting that each of the three references shows some of the film-formers, tackifiers, plasticizers and solvents appearing in appellant's lists. The board found that the recited limitation of incompatibility was too relative a term to distinguish over the compositions of the references.

The board found that the claims to the treated brush were unpatentable, under 35 U.S.C. 103, over

Vaughan in view of Sergi or Depew. Since Vaughan shows treating brushes, the board apparently considered it obvious to treat brushes with compositions which it thought were made obvious by Sergi or Depew.

The board also affirmed the rejection of certain claims for being "broader than the disclosure" under 35 U.S.C. 112. The board's basis for this rejection was that the specification did not provide adequate guidelines for making a selection among the various disclosed ingredients, nor among other materials which are not disclosed but would be included by the claims.

Opinion

We first treat the rejection under section 112. This rejection is in effect an attack on the specification as being insufficient to teach how to practice the broad invention claimed. The rejection is therefore under the first paragraph of section 112. The board's position, as mentioned above, was that the specification did not teach how to select ingredients so that the desired incompatibility would result. We disagree with the board's position on this point. First of all, appellant provided four examples, each specifying the nature and amounts of materials to be used. Secondly,

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the record indicates that it involves only routine experimentation to find out which resins are incompatible. The examiner admitted as much when, with regard to obviousness, he said "selecting the proper tackifier and film-forming resin from those listed in the references to form an emulsion or two-phase composition would be within the expected skill of the art and would merely involve routine experimentation." We conclude that appellant has provided a sufficient specification to support the claims here in issue.

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Footnotes

Footnote 1. U. S. Pat. 3,051,670, issued August 28,

Footnote 2. U. S. Pat. 2,933,469, issued April 19,

Footnote 3. U. S. Pat. 3,015,638, issued January 2,

Footnote 4. U. S. Pat. 2,890,136, issued June 9, 1959.

- End of Case -

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ISSN 1526-8535

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